

## Activity 4

### Volcanic Hazards: Airborne Debris

#### Think About It

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- Could material from a volcanic eruption ever reach your community?
- Explain your ideas.



## WHAT DO YOU THINK?

## Activity 4

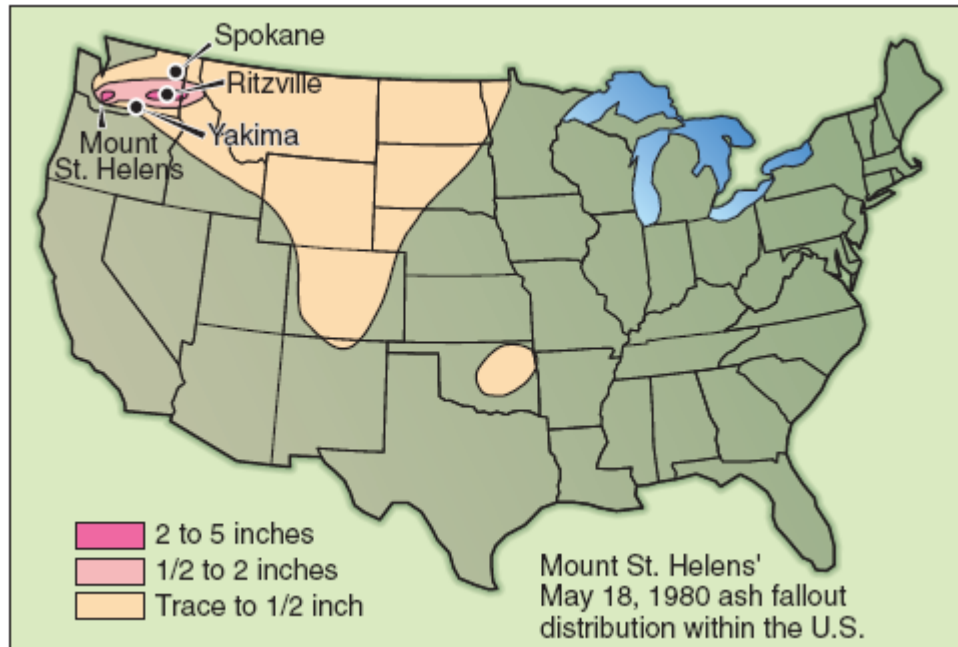
### Investigate

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1a. How many states showed at least a trace of volcanic ash?

1b. In what direction did the ash move?

1c. Was Canada affected by ash from Mt. St. Helens? Explain.

2. Copy the table with volume from least to greatest.

2a. Make a bar graph.  
Plot the name of the  
volcano on the horizontal  
axis.

3c. What other  
information (besides  
volume) would help you  
to predict how far the  
ash would go?

4a. Group the size of  
each eruption in order  
from smallest to largest.



4b. Describe any relationship between the size of the eruption and the area covered.

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Digging Deeper

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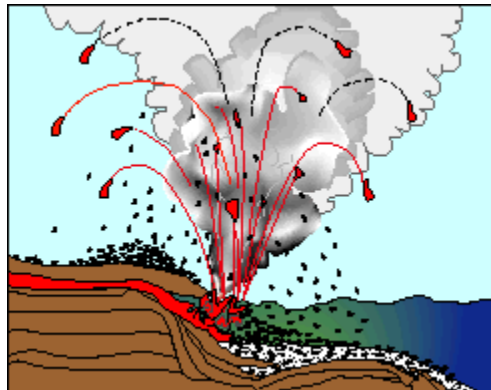
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**Learning Objective:** In writing, SWBAT define tephra, and differentiate between different types of tephra, using academic language.

pieces of rock and hardened lava that are thrown out of a volcano during an eruption



a large, rounded piece of tephra greater than 64 mm in size



tephra that ranges in size from 2 to 64 mm



fine tephra that is less than 2 mm in diameter





Larger tephra

bombs and lapilli usually fall to the ground on or near the volcano



travels hundreds to thousands of kilometers

### **Learning Objective:**

**In writing, SWBAT analyze the hazards associated with volcanic ash using academic language.**

Ash hazards

- can collapse roofs of homes, factories, and schools
- affect breathing in humans and animals
- damage automobile and truck engines
- interfere with photosynthesis in plants by blocking out the sun
- damage aircrafts
- cause lahars, especially when rain soaks it loose



[https://www.youtube.com/watch?v=3\\_5pxJjFFPk](https://www.youtube.com/watch?v=3_5pxJjFFPk)

## Activity 4

### Check Your Understanding

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1. Name two factors that can affect the distance volcanic ash can travel.
2. What is tephra? How do volcanic bombs, lapilli and ash relate to tephra?
3. How does the amount of silica in magma affect how explosive a volcano can be?